

ONE PREVIOUSLY DESCRIBED AND ONE NEW SPECIES OF SOUTH  
AMERICAN BRUCHIDAE INJURIOUS TO COMMERCIAL  
LEGUME SEED CROPS  
(COLEOPTERA)

JOHN M. KINGSOLVER, *Systematic Entomology Laboratory,  
Entomology Research Division, Agr. Res. Serv., USDA*<sup>1</sup>

In the collections of the U.S. National Museum are specimens of two species of South American Bruchidae which have been reared from seeds of clover (*Trifolium pratense* L.) and seeds of alfalfa (*Medicago sativa* L.). The species in clover is from Chile and has been identified by comparing it with type specimens of *Bruchus* (s. l.) *pyrrhomelas* Philippi; the one reared from alfalfa from Peru and Bolivia is apparently new and is described herein.

These two species are remarkable in that they are clearly related to groups of species peculiar to the New World but as far as known do not relate closely to Old World species of *Bruchidius* (s. l.) infesting *Trifolium* spp. or *Medicago* spp. The New World species have obviously moved from their yet unknown native hosts into the introduced legumes.

*Sennius willei*, n. sp.

*Bruchidius* n. sp., Wille, 1943, p. 358.

*Length*: 1.25–1.50 mm. *Width*: 0.75–1.0 mm. *Color*: Integument black, front and middle legs red, occasionally dusky at base of femur; hind femur piceous in basal two-thirds, apex red, tibia and tarsal segments red; antenna with segments 1–4 (occasionally 5 also) red, 6–11 piceous; labrum red-brown; vestiture of ochreous or brown and gray slender setae in vague fasciate pattern on elytra (fig. 1), faintly striped on pronotal disk; venter with gray setae evenly distributed but denser on metepisternum and lateral margins of abdomen; pygidium with wedge-shaped median condensation of setae.

*Head* broad; eyes prominent; ocular sinus three-fourths length of eye, densely setose; postocular lobe with narrow fringe of setae; frons densely, strigosely punctate, punctures setiferous; frontal carina faint, ending in obscure dorsal boss; fronto-clypeal suture prominent, fringed with setiferous punctures; setae overlying clypeus; clypeus with punctation similar to that of frons; labrum semicircular, impunctate, with 2 setae on either side near apical margin, fringe of short setae on apical margin; palpi black; antenna short, setose, reaching posterior angle of pronotum, segments 1–4 clavate, 5–10 slightly eccentric (fig. 5), ovate in cross-section, 11 oviform with apical spine. *Pronotum* campaniform (fig. 1), length to width ratio 11 : 9, lateral margins slightly arcuate, anterior margin rounded, basal margin truncate laterally, prescutellar lobe prominent, emarginate; pronotal disk punctulate, with scattered, ovate, setiferous foveae; lateral carina of disk obsolete; prosternum triangular, carinate between apically contiguous coxae.

<sup>1</sup> Mail address: c/o U.S. National Museum, Washington, D.C. 20560.

*Elytra* subquadrate, separately rounded apically, together slightly longer than wide (8.8 : 8.0); striae not distorted laterally at base, deeply impressed, setiferous strial punctures scarcely visible; first stria ending basally at apex of scutellum, second ending basally in a small, deep pit, third, fourth and fifth variable at base, sometimes ending in simple denticles, sometimes with denticles placed on narrow, flat ridge parallel to basal margin, remaining striae as in fig. 1; intervals transversely, finely rugulose; bead of sutural margin fine, continuous with serrate bead of apical margin. *Hind femur* short, length to width ratio 4 : 1.5, not carinate beneath, with single, fine denticle near apex on inner ventral margin (fig. 4). *Hind tibia* short, stout, straight, carinate on lateral face, ventral carina lacking; apical margin with 3 teeth subequal in length to mucro (fig. 4); basitarsus strongly curved, carinate, subequal in length to remainder of tarsal segments combined. *Pygidium* of male bent under slightly at apex and fitting into slight emargination on last sternite. *Male genitalia* (figs. 2 & 3) with ventral valve triangular, setiferous; hinge sclerites boat shaped, hollow; internal sac trilobed, densely armed with fine spicules; gonopore valve sclerite circular. Lateral lobes (fig. 3) deeply divided, setiferous.

Holotype ♂, PERU: Omas, 60 mi SE Lima, Mar. 1, 1935, J. Wille, coll., #10-35, in alfalfa seed. USNM 69941.

Paratypes, 12 ♂, 14 ♀, same data as holotype. PERU: Ancash, Feb. 10, 1934, J. M. Lamas, coll., #2-34, in alfalfa seed, 7 ♂, 10 ♀; Lima, Apr. 29, 1958, H. R. Yust, coll., 1 ♂. BOLIVIA: LaPaz, Dec. 1945, R. Perez, coll., in alfalfa seed, 3 ♂, 3 ♀.

I am placing this species in *Senniüs* partly on the basis of external characters and partly on peculiarities in the male genitalia. The generic limits of *Senniüs* have yet to be drawn, but in the species I have seen which seem to be congeneric with the type-species, *Senniüs cruentatus* (Horn), a characteristic pair of boat-shaped sclerites at the apical orifice in the male genitalia is always present as is a unidentate hind femur and the lack of a lateral carina on the pronotum.

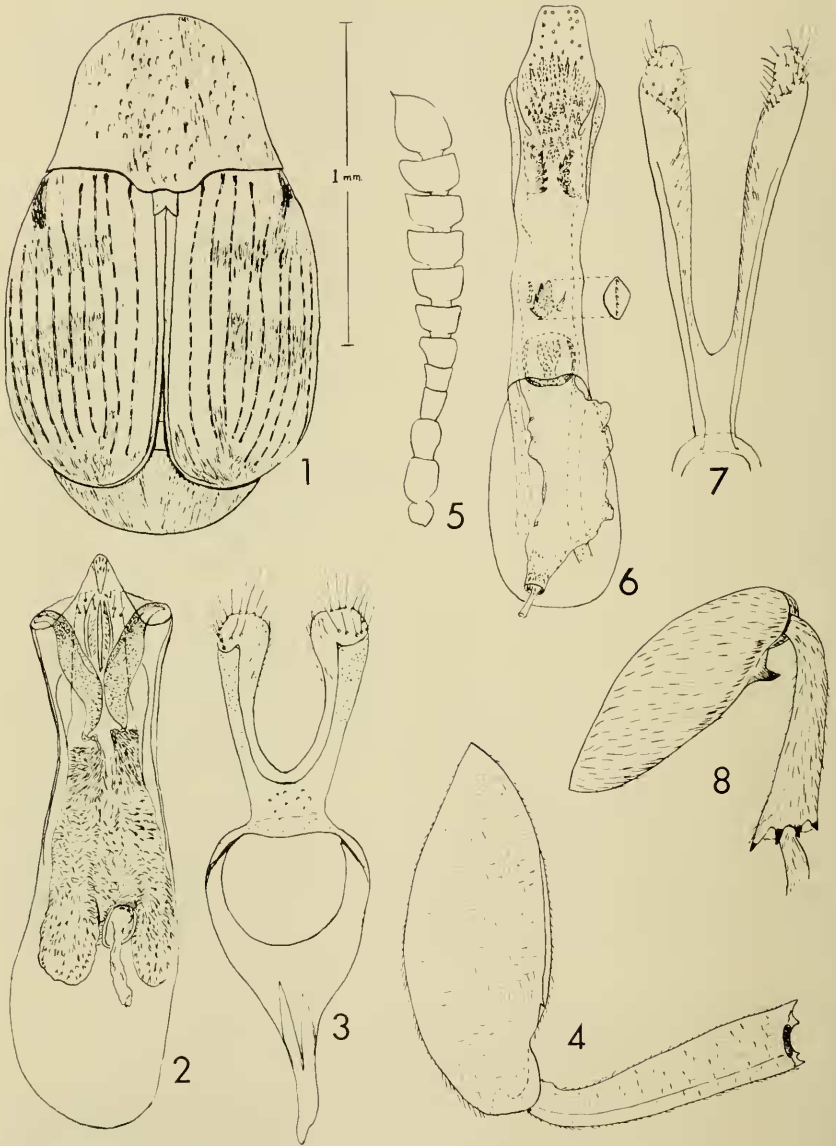
Dr. Wille (1943) listed this species as *Bruchidius* sp. apparently on the authority of the late H. S. Barber, whose identification labels were attached to the specimens in the U.S. National Museum collection. I could find no descriptions of Bruchidae which could apply to this species.

#### *Acanthoscelides pyrromelas* (Philippi)

*Bruchus pyrromelas* Philippi, 1864, p. 359; Pic, 1913, p. 43.

*Acanthoscelides pyrromelas*: Blackwelder, 1946, p. 761.

*Length*: 1.3–1.6 mm. *Width*: 0.75–1.0 mm. *Color*: Mature specimens: integument black; hind femur black; hind tibia and tarsus, front and middle legs dark brown to black; antenna black with basal 4 segments reddish beneath. Vestiture of bronzy and gray slender setae nearly evenly distributed over body except for slight condensation along midline of pygidium, dense gray stripe on metepisternum and dorsal margins of abdominal sternites, and dense white patch on scutellum. Teneral specimens: elytra mostly red except for black sutural stripe narrowed apically.



Figs. 1-5, *Sennius willei*, n. sp.: 1, dorsal habitus; 2, median lobe, ventral; 3, tegmen, dorsal; 4, hind leg, mesal face; 5, antenna. Figs. 6-8, *Acanthoscelides pyrrhomelas* (Philippi): 6, median lobe, ventral; 7, lateral lobes, dorsal; 8, hind leg, lateral face.

*Head* with frons convex, without frontal carina but usually with vague, impunctate median line ending dorsally in shallow, elongate fovea on level with dorsal margin of eye; surface minutely granulose with scattered, shallow depressions each bearing a curved seta; eye prominent, convex, ocular sinus about one-half length of eye, densely setose; clypeus slightly depressed, thinly clothed with golden setae; labrum with transverse basal row of short, fine setae and a transverse row of 4 stouter setae; antennae slender, gradually clavate. *Pronotum* campaniform, wider than long, lateral margins slightly constricted near basolateral angles; prescutellar lobe shallow; disk evenly convex, with short, mesal sulcus near basal margin; punctation scattered, fine, shallow; lateral carina lacking but replaced by obtuse ridge; apex with vertical submarginal sulcus prominent; tubercle at insertion of front coxa prominent, shining; prosternum short, triangular. *Elytra* together as wide as long, lateral margins arcuate, apical margins evenly rounded; striae not distorted, intervals of approximately equal width, striae 3, 4 and occasionally 5 each ending basally in a fine denticle, striae 5 and 6 joining at apical three-fourths, remaining striae free apically. Scutellum short, angulately emarginate apically, densely clothed with white setae. *Front and middle legs* not modified. *Hind femur* (fig. 8) fusiform, not strongly incrassate, ventral carinae obsolete, inner ventral margin with sharp tooth, without denticles apical or distad of tooth. *Hind tibia* slender, bent only at base, gradually clavate, slightly flared at extreme apex, terminal margin truncate with three short, dark teeth; mucro slightly longer and more slender than teeth; carinae entirely lacking on inner and outer faces; basitarsus clavate, about one-half as long as tibia. *Abdomen* not modified except apical margin of last sternite emarginate in ♂. *Pygidium* more strongly convex in ♂. *Male genitalia* (figs. 6 & 7) with ventral valve spatulate, truncate, armature of internal sac as figured; lateral lobes deeply cleft, spatulate.

Lectotype ♂ selected from type series kindly loaned to me by Dr. Vicente Perez de Angelo through Dr. Guillermo Kuschel. Specimen originally mounted on broad, white, triangular point, but remounted on narrow, white point. Pin lacking locality labels. Two other paralectotypes on broad points on same pin. Male genitalia of lectotype mounted in glycerin in microvial. Nine paralectotypes total are in the type-series. Type-locality from original description: Santiago, Chile.

Additional records: CHILE: Santiago, M. J. Riviera, in *Trifolium pratense* L.; Santiago, April 23, 1953, Ariztia (coll.) from clover seeds; Valparaiso, February 1928, E. P. Reed; Placilla, Colchagua, February 21, 1958, C. Vergasa; Sta. Cruz, Colchagua, May 27, 1928, C. Vergasa.

The lectotype and paralectotypes are teneral specimens, each with red elytra and black sutural stripe, as was indicated in the original description. I have examined two other series composed of teneral as well as fully matured black specimens, both forms having the same distinctive characteristics in the male genitalia.

The nearest relative of this species I have seen is an unidentified species represented by three specimens from Chile reared from *Astragalus curvicaulis* (Clos.) Reiche, a native legume, received

through U.S. Plant Quarantine. Both species belong to a small group which is apparently peculiar to Chile and includes *Acanthoscelides egenus* (Philippi), *A. mutatus* (Pic), *A. scutellaris* (Philippi), and *A. bimutatus* (Pic). All are minute species with the hind femur slender and unidentate, the hind tibia lacking carinae, and with fine denticles basally on certain of the elytral striae.

Although *A. pyrromelas* and its related species share the character of the non-carinate hind tibia with *Lithraeus electus* Bridwell and *L. atronotatus* (Pic), the presence of other characters i.e., strial denticles, femoral tooth, presence of a strong mucro on the hind tibia, exclude the *pyrromelas* group from *Lithraeus*. For the present, I prefer to leave this group in *Acanthoscelides* (sens. lat.) and treat it as a species group within the genus until the New World genera of Bruchidae are more precisely defined.

The Old World genus *Bruchidius* to which the clover seed bruchids—*Bruchidius alfieri* (Pic), *B. trifolii* (Motschulsky), *B. sericatus* (Germar), and *B. perparvulus* (Boheman)—are presently placed is a composite genus in need of a complete revision, but the four species named above can be distinguished from *Sennius willei* and *Acanthoscelides pyrromelas* by the long, serrate male antennae and marked differences in details of the male genitalia (see de Luca, 1958, p. 16).

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